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AGO D/A ltr, 11 Jun 1980; AGO D/A ltr, 11 Jun
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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

AGDA-A (M) (3 May 71) FOR OT UT 71B009

1 June 1971

SUBJECT: Senior Officer Debriefing Report: BG Robert C. Hixon, CG, XXIV Corps Artillery, Period 17 November 1969 to 1 September 1970 (U)

SEE DISTRIBUTION

1. Reference: AR 1-26, dated 4 November 1966, Subject: Senior Officer Debriefing Program (U).
2. Transmitted herewith is the report of BG Robert C. Hixon, subject as above.
3. This report is provided to insure appropriate benefits are realized from the experiences of the author. The report should be reviewed in accordance with paragraphs 3 and 5, AR 1-26; however, it should not be interpreted as the official view of the Department of the Army, or of any agency of the Department of the Army.
4. Information of actions initiated under provisions of AR 1-26, as a result of subject report, should be provided to the Assistant Chief of Staff for Force Development, ATTN: FOR OT UT within 90 days of receipt of covering letter.

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VERNE L. BOWERS
Major General, USA
The Adjutant General

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DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY VIETNAM
APO SAN FRANCISCO 96375

AVHDO-DO

19 JAN 1971

SUBJECT: Senior Officer Debriefing Report - BG Robert C. Hixon

Assistant Chief of Staff for Force Development
Department of the Army
Washington D.C. 20310

1. Inclosed are three copies of the Senior Officer Debriefing Report prepared by BG Robert C. Hixon. The report covers the period 17 November 1969 - 1 September 1970, during which time BG Hixon served as Commanding General, XXIV Corps Artillery.
2. BG Hixon is recommended as a guest speaker at appropriate service schools and joint colleges.

FOR THE COMMANDER:

A handwritten signature in black ink, appearing to read "Clark W. Stevens Jr."

Clark W. Stevens Jr.
Captain AGC
Assistant Adjutant General

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as (trip)
2 Cy w/d HQ DA

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DEPARTMENT OF THE ARMY
HEADQUARTERS, XXIV CORPS ARTILLERY
APO San Francisco 96349

AVII-ATC

1 September 1970

SUBJECT: Senior Officer Debriefing Report (RCS-CSFOR-74) (U)

Commanding General
United States Army Vietnam
ATTN: AVHAG-DST
APO San Francisco 96375

1. (U) Reference: USARV Regulation 1-3 (C), dated 1 June 1969, subject: Senior Officer Debriefing Program (U).

2. (U) The period from 17 November 1969 to 1 September 1970, during which I was in command of XXIV Corps Artillery, was one of constant change. The US troop redeployments, the steadily increasing skill and responsibility of RVNAF, and the renewed attempts by the enemy to exert battlefield pressure and to destroy the pacification program all combined to make flexibility of action the most important aspect of artillery operations in XXIV Corps. Although the DMZ area remained of vital importance, the main enemy activity and the area of greatest/continuing threat was in the western portions of the Corps area, especially western Thua Thien. In conjunction with RVNAF, XXIV Corps Artillery reacted strongly to this threat and was instrumental in reducing it to tolerable levels. In each of our operations we used the tactics and techniques which, we felt, were best suited to the tasks to be performed. The optimum solution in one area or one situation often could not be applied in another. In this report I will summarize the more significant occurrences during my period of command, and discuss some lessons learned which might be of value to others.

3. (C) Efforts toward Vietnamization were accelerated sharply during this period. With the redeployment of the 3d Marine Division and its supporting forces, the role of the 1st ARVN Division in the northern Military Region 1 (MR1) grew rapidly in importance. Although not as sharply affected by redeployments, the 2d ARVN Division and the forces of the Quang Da Special Zone also consistently increased their share of the operations of I Corps. This process obviously must continue, and the capability to sustain the major burden of combat operations in the area must be rapidly assumed by RVNAF. For this reason, coordination and cooperation with the ARVN, along with the provision of fire support and other assistance as required were top priority tasks for XXIV Corps Artillery. US artillery commanders at all levels personally coordinated with ARVN artillery commanders at the equivalent echelons. The I Corps Artillery Commander was made aware of all the significant activities of XXIV Corps Artillery before or as they took place, and when both forces were involved full consultation and coordination were effected. ARVN artillery commanders regularly attended the periodic artillery commander's conferences which were conducted at XXIV Corps Artillery Headquarters. The fire support coordination and artillery liaison between US and ARVN forces were jointly studied with the ARVN,

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and improvements were made when found appropriate. The mutual use of US and ARVN artillery support by both forces was encouraged to insure maximum effectiveness from the available resources. The heavy artillery units of XXIV Corps Artillery were, whenever possible, positioned at ARVN installations and fire bases, with the mission of reinforcing ARVN artillery fires. The mutual use of artillery support increased markedly. However, the real key to successful Vietnamization will be the early ability of Vietnamese forces to operate with minimum US support. A number of programs were initiated by XXIV Corps Artillery to assist the Vietnamese in achieving this posture. Members of the Corps Artillery staff assisted in the conduct of instructor training for a refresher training program involving all ARVN artillery units in Quang Tri, Thua Thien, and Quang Nam Provinces. The ARVN teams were then augmented by US artillery teams while they conducted the training at each of the ARVN firing battery locations. These teams were provided by US units located in the same general areas as the units to be trained. This program proved very successful, and did much to compensate for the shortages of experienced ARVN artillerymen, which resulted from the rapid expansion of ARVN artillery. XXIV Corps Artillery and I Corps Artillery conducted a survey, and determined that Regional Forces/Popular Forces (RF/PF) proficiency in artillery adjustment procedures required upgrading. Two separate training programs were undertaken; one for PF and one for RF. The RF training began on 10 June 1970 and the PF training on 15 June 1970. The Corps Artillery Firing Battery Inspection Team, which previously had concentrated on US units, began, in February 1970, to concentrate exclusively on ARVN units. At the same time each Division Artillery and the 108th FA Group set up inspection teams of their own to continue periodic inspection of US artillery units and to insure that a constant high state of proficiency was maintained. With the cooperation and assistance of the ARVN artillery commanders, the team visited almost all of the firing batteries in the 1st ARVN Division. The program appears to have had a significant effect in improving fire direction techniques, firing batteries operations and safety in the organizations visited. These visits are intended to be continued as long as they can be supported by XXIV Corps Artillery. Assistance similar to that given to ARVN is envisioned for the Regional Forces (RF) artillery platoons when deployed to support territorial forces. Although I believe that our assistance has made a substantial contribution to ARVN artillery units in Military Region 1, I would like to emphasize that primary credit for their progress should be attributed to their own excellent leadership. The professionalism of the ARVN officers is unquestioned, and I am confident that ARVN artillery will be more than capable of performing its expanded missions in the future. (A more detailed discussion of Vietnamization is found at inclosure 1.)

4. (C) On 9 March 1970, XXIV Corps became the senior US headquarters in Military Region 1 taking over from III Marine Amphibious Force. Concurrently, the Corps and Corps Artillery Headquarters displaced from Phu Bai to

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Da Nang. No serious problems were encountered by Corps Artillery as a result of the expanded Corps mission and area of operations, although some reorganization was deemed necessary. The two heavy artillery battalions located in Northern MRI, the 1st Bn 83d Arty and the 1st Bn 39th Arty, which had previously been controlled directly by Corps Artillery, were attached to the 108th Artillery Group. The Group was then in command of all four of the Corps Artillery heavy battalions, since all were initially to remain in Northern MRI. The other assets of Corps Artillery, the air defense automatic weapons battalion, a searchlight battery, a Quad 50 machine gun battery, and a target acquisition battery, were detached from the Group and placed under the direct control of Corps Artillery. This was done to facilitate the accomplishment of their mission of general support to the entire XXIV Corps. Two non-divisional type artillery battalions, which normally would be under the control of Corps Artillery, remained assigned to the Americal Division. Although the attachment of these units to Corps Artillery was considered desirable, action in this regard was deferred pending future reorganizations which would become necessary upon further redeployment of US units. (A more detailed discussion of the expansion of the Corps is included at inclosure 2.)

5. (C) During late 1969 and early 1970, when the Northeast Monsoons severely restricted air and ground operations in the western portions of Quang Tri and Thua Thien Provinces, the enemy began a significant buildup in these areas. The heavy artillery units of the Corps were positioned to the west, exploiting their range capability and enabling heavy artillery to engage these targets to and beyond the Laotian border. These heavy artillery batteries were often the only means available to the ground commanders for attack of western enemy locations. The heavy artillery units were used extensively in this role of dominating areas not accessible to maneuver elements. However, even from positions at the western most occupied fire bases, they were not able to provide the required density of fire to the west. Therefore, a series of raids was initiated. For limited periods of time, varying from a few hours to five days, heavy artillery units occupied positions west of the permanent fire bases and delivered high volumes of fire on intelligence targets and available targets of opportunity. Artillery units making these raids were accompanied by the requisite security and support elements, with command of the operation resting with maneuver commander in whose area of operations the raid position was located. When weather permitted, available tactical air and armed helicopter support was used for strikes in the raid target area and aerial battle damage assessment was obtained. Unfortunately weather generally prevented any extensive air operations, and battle damage assessment was often not obtained. However, the failure of the enemy to mount later offensives which he had planned for the area was an indication of the effectiveness of the heavy artillery raid concept. (Further details regarding the conduct of the raids and the lessons learned are at Inclosure 4.)

6. (C) Although assets were decreased during the period, naval gunfire support continued to make a valuable contribution to the firepower available in MRI. Priority of ships with heavy armament was given to MRI. During May,

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June and July 1970, a heavy cruiser armed with nine 8 inch and ten 5 inch guns complemented the destroyers on station. Within MR1, priority was given to the DMZ area, and a ship was positioned in that area 99 per cent of the time. (See Inclosure 5.)

7. (C) One of our units, the 1st Battalion, 39th Artillery, was reconstituted from a 155mm SP battalion to a 175mm/8inch battalion during March and April 1970. This action was proposed and approved on the basis of current and programmed ARVN artillery resources in M11. The ARVN artillery already had a 155 howitzer capability, which are towed/air mobile and therefore more flexible than the M-109 SP howitzer with which the 1/39th Arty was equipped. Three 155 howitzer battalions were deployed at the time, and another was preparing for deployment a short time later. On the other hand, ARVN had no heavy artillery capability, and none was programmed for the near future. When the 5th 175 Gun Battery, USMC, and a platoon of the 1st 8inch Howitzer Battery, USMC were designated for redeployment, the need for additional heavy artillery in Northern MR1 became apparent. These units had been positioned in the eastern and central DMZ areas. Corps Artillery successfully arranged for the transfer of eight of the weapons belonging to these deploying units from the Marine Corps to the Army, and on to the 1st Battalion, 39th Artillery. The additional four weapons needed for the conversion were obtained from Army resources. There were some minor operational difficulties involved in the conversion, chiefly those of training in a new weapons system while at the same time maintaining combat operations with the old. However, these difficulties were resolved and each of the batteries successfully completed a certification check prior to becoming operational with the new system. The transition process was eased by phasing the conversion, one battery at a time, and by practical training assistance rendered by nearby heavy artillery units. The primary problem encountered was in logistics; specifically in obtaining equipment other than the primary weapons. This problem is discussed further in paragraph 8, Inclosure 9.

8. (C) The importance of sensors as target acquisition devices continued to increase during my period of command. US units used various systems for coordinating the attack of targets detected by the devices, all of which proved satisfactory. Significantly, ARVN units also employed sensors extensively, with some of the best results being obtained by ARVN engagement of targets along routes of approach to populated areas. Sensors are particularly effective when used in combination with other target detection devices such as radar and the Integrated Observation System. They should continue to be valuable means of target detection in M11. (See Inclosure 7.)

9. (C) During the period March through June 1970 ammunition expenditures increased due to the increase in enemy activity and the dry season operations of our maneuver elements. It became necessary for USARV to conserve resources by allocating artillery ammunition of all calibers. As a result of this and

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a reduction of DA Ammunition Procurement, we found it necessary to curtail artillery expenditures and develop command guidance which would enjoin subordinate maneuver commanders to analyze targets carefully to ensure economical management of our dwindling assets. To this end I prepared a letter (Incl 8) for the Commanding General on the subject of expenditures. This letter has since had a marked affect on reducing expenditures by simply requiring commanders to do a more professional job with fewer resources. I again emphasized my concern over rising expenditures to the Secretary of the Army during his visit on 1 July. During the briefing (Incl 9) I explained that, although we had been shooting more, as maneuver units moved west during the dry season, our heavy expenditures would tend to decrease. During the months of July and August, the newly established policies bore fruit as a significant reduction in expenditures was achieved with no loss in effective fire support for the ground commanders.

10. (C) The artillery situation in Military Region 1 is good. Although the ARVN units have not fully attained the standards established for US artillery, they are making good progress. Their performance during my period of command clearly demonstrated that they are quite capable of overcoming the remaining problems and satisfactorily performing their mission. As US redeployments continue, the ARVN artillery units and territorial support platoons should be able to compensate for much of the lost US firepower. I believe that any deficiency in support which might occur will be caused by a requirement for more units at a given time and place, and not because of inadequacies of the units themselves.

Robert C. Hixon

ROBERT C. HIXON
Brigadier General, USA
Commanding

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1. Vietnamization
 2. Change of Mission of XXIV Corps
 3. Operations
 4. Heavy Artillery Raids
 5. Naval Gunfire
 6. Intelligence and Target Acquisition
 7. Sensors as Target Acquisition Devices
 8. CG Ltr on Ammunition Expenditures
 9. Briefing for Secretary Resor
 10. Administration
 11. Logistics
 12. Use of Secure FM Voice Communication by Artillery units in RVN

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VIETNAMIZATION

1. (U) The period, 19 November 1969 to 1 September 1970, was marked by a conscious shift in emphasis on the part of Corps Artillery, from US to ARVN artillery matters. Most actions taken by the command were related in some manner to the continuing redeployments of US units and the consequent increase in importance of RVNAF forces. In this regard, Corps Artillery dealings with ARVN artillery can be described as one of cooperation, coordination, and assistance.
2. (C) From 19 November to 9 March 1st ARVN Division Artillery was the principal point of contact between XXIV Corps Artillery and the ARVNAF. Coordination with ARVN artillery was carried out through all command and staff echelons in I Corps and XXIV Corps. After 9 March when XXIV Corps replaced III MAF frequent personal contact was made between the I Corp Artillery and XXIV Corps Artillery commanders. Matters worked out during these meetings included artillery positioning, security for jointly occupied fire support bases, counter mortar/counter rocket activities, ARVN participation in US heavy artillery raids, technical assistance for ARVN artillery units, and limited technical logistics assistance. The I Corps Artillery commander and the commanders of the 1st and 2d ARVN Division Artilleries were included in the regular conferences with commanders of artillery units with the Corps. This coordination between commanders was extended to lower levels of command, particularly in northern Military Region 1 (Quang Tri and Thua Thien Provinces) with respect to the positioning and use of artillery. US battalion commanders consistently maintained contact with the commanders of the ARVN units operating in the same or nearby areas. A system of liaison between US and ARVN artillery elements facilitated exchange of information, mutual reinforcement of fires, and the coordination of clearances to fire in or near the areas of operations of other forces. Generally speaking, this liaison was established down to brigade/regiment (DS artillery battalion) level. In most cases, US liaison teams were positioned with ARVN units, but the opposite was true in some instances. The expanded use of ARVN liaison teams is being encouraged in preparation for further US troop withdrawals.
3. (C) A XXIV Corps Regulation was prepared by Corps Artillery to outline the minimum essential liaison requirements for ensuring effective mutual coordination of US and ARVN fires. The regulation also included provisions for establishment of liaison between supporting artillery elements and territorial force headquarters down to subsector level. Although the limited number of qualified artillery personnel prevented significant ARVN participation in furnishing liaison parties to territorial forces, the system which was developed can be transferred to the ARVN at a later time, modified as necessary.
4. (C) Constant efforts have been made to improve the support of the ARVN by US heavy artillery units. The extensive artillery liaison systems were vital to the implementation of this program. Additionally, continuous personal contact has been made to make ARVN commanders aware of the excell-

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ent support which can be rendered to their forces by XXIV Corps heavy artillery units. In many instances, US heavy artillery units have been positioned at ARVN or other GVN firebases and installations to facilitate this support. Although some new challenges were presented by this program, (e.g. making arrangements for ARVN security support), they were resolved with a minimum of difficulty. Plans were also formulated for assisting I Corps Artillery in the conduct of heavy artillery training for ARVN units when this becomes necessary. Toward this end a complete program of instruction, including lesson plans, was prepared.

5. (C) Work was initiated on the Vietnamization of the artillery and airstrike warning system. Currently, these facilities are located in US installations and are manned exclusively by US personnel. The GVN has a parallel system where artillery advisories are provided to RVNAF Tactical pilots by RVNAF Tactical Air Control Parties (TACP). The TACP's are of two types; a permanent TACP is located at each sector headquarters, and mobile TACP's are positioned with supported maneuver units during operations. The exchange of information between the two systems, ARVN and US, has been found to be inadequate, at least partially because of language difficulties. US firing information is not always received by the VNAF TACP's, and VNAF pilots do not normally obtain such information from US control systems. Additionally, not all of the ARVN artillery firing information is being made available to the US warning system. Various solutions to this problem are under consideration, but it appears now that collocation of the US and RVNAF warning agencies offers the most advantageous solution. Several alternative locations for the combined facilities are under study with the goal of eventually transferring the entire system to the Vietnamese. Currently, it appears that the respective sector headquarters will be chosen as the location for the majority of the combined facilities, with coverage being provided on an area basis to both US and VNAF aviators.

6. (C) Corps Artillery participated in two major artillery training programs for Vietnamese forces. In cooperation with the Commanding Officer of I Corps Artillery and the I Corps Deputy Commander for territorial forces, an extensive program was initiated to train territorial forces in procedures for requesting and adjusting artillery fire. Assistance was also given to the artillery units in the 1st ARVN Division and in the Quang Da Special Zone in the conduct of a comprehensive artillery refresher training program ordered by JGS.

a. Territorial Forces Training A team of officers from XXIV Corps Artillery and I Corps Artillery conducted a survey during the period 16 - 20 April 1970 to determine the present level of proficiency of Regional Forces/Popular Forces (RF/PF) personnel in artillery adjustment procedures, and to ascertain the desirability of conducting training in this subject. The team spoke with GVN officials and/or US advisors in all five provinces and eleven districts; all agreed upon the necessity for FO training for RF/PF personnel

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and enthusiastically indorsed a combined program by XXIV Corps Artillery and I Corps Artillery to conduct such training. Two separate training programs were undertaken, one for RF and one for PF personnel. The goal for the RF program is to train the following numbers of officers from the various RF command echelons:

- (1) Sector Headquarters - 1
- (2) Subsector Headquarters - 1
- (3) Battalion Headquarters - 2
- (4) Company - Group headquarters - 2
- (5) Company - 3

At the conclusion of the program a total of 889 RF officers will have been trained in artillery adjustment procedures in MRL. The RF training is being conducted at the Americal Division as a part of the RF/PF Leadership and Orientation Course. The first class started on 10 June 1970. The PF training is being conducted by ARVN artillerymen at 12 sites in MRL at local ARVN batteries. Each class lasts three days and stresses basic essentials and actual firing. The PF training program will train a total of 3138 PF leaders in artillery adjustment procedures. The PF training began on 15 June 1970. It is anticipated that the PF training will be completed in about eight weeks.

b. Refresher training for ARVN artillery During March 1970, two officers from the XXIV Corps Artillery staff provided rulltime assistance in the instructor training phase of a refresher training program in the 1st ARVN Division. Representatives of all artillery battalions in the 1st ARVN Division and the Quang Da Special Zone underwent three weeks of instruction to prepare them to conduct training in their own organizations. Separate courses were presented in fire direction procedures, firing battery operations and maintenance, communications and vehicle maintenance. Upon completion of the instructor training phase of the program, a mobile training team was formed in each battalion to conduct training at firing battery positions. An officer and an NCO were provided to each of the mobile teams by US units located in the same general area as the ARVN battalion. Visits to the units which were made during and after the training indicated that the program was very successful.

7. (U) Firing Battery Inspection Team In February 1970, the primary emphasis of the Corps Artillery Firing Battery Inspection Team (FIBIT) was placed on technical assistance to ARVN artillery units. With the concurrence and full cooperation of the Commanding Officer, I Corps Artillery, firing batteries in the 1st ARVN Division, Quang Da Special Zone and the 2d ARVN Division were evaluated by the team. Detailed technical checks of fire direction procedures, firing battery operations and maintenance, and safety were made in each battery visited. On-the-spot critiques were given during and at the end of each visit, and a formal report was forwarded to I Corps Artillery. Although it was not possible to visit all of the ARVN batteries in MRL, good coverage of the 1st ARVN Division and the Quang Da Special Zone was obtained. It is planned that the program will continue indefinitely with, as in the past, the sequence of

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the batteries visited as requested by CO, I Corps Artillery.

8. (C) Logistics Assistance Logistics assistance to ARVN Artillery was to a large extent limited to technical assistance and advice. The ARVN logistics command structure parallels that of the US Army with Logistics Command Headquarters in Saigon and subordinate logistics command in each of the Military Regions. The advisor structure (US) designed to assist the logistics elements is responsive and capable. However, it is limited in the number of technical personnel that are available. US artillery units can and have filled this void by liaison with US technical support staffs and arranging for visits to ARVN units. Logistics assistance was primarily furnished on in emergency situations, realizing it should be avoided when possible in order to exercise the ARVN system. US advisors must insist on the ARVN making their systems function. Further, when emergency assistance was given which included providing spare parts by US units, we attempted to insure that ARVN units took parallel action in their own logistics channels to record the demand.

9. (C) Territorial Artillery Although no territorial artillery platoons have as yet been deployed in MRL, XXIV Corps Artillery has monitored the progress of planning for them. ARVN artillery units are expected to provide the bulk of training and other assistance required by the platoons, but some support is expected to be required of US units. Particularly important is the necessity for detailed coordination between US, ARVN, and territorial forces for fire support coordination and clearances to fire. We have already initiated preliminary planning for a system to achieve this.

10. (C) Outlook for GVN Artillery The quality of ARVN artillery units now in MRL is generally good and can be expected to improve in the future. The great expansion of ARVN artillery which has been taking place during the past year has caused the experienced officers to be spread relatively thinly. ARVN artillery officers appear to be as competent technically as a similar sampling of US artillery officers of equivalent rank. Many aspects of ARVN artillery operations are excellent. There is a universal enthusiasm among officers and men to furnish the maneuver elements with the best, most responsive fire support possible. Great attention is paid to operator maintenance, and crew training is good. Firing battery areas are almost always neat and well organized, with ammunition and section equipment well cared for. The most serious problems which must be overcome by ARVN artillery relate to accuracy and refinements in firing techniques. Generally, ARVN artillery units should conduct registrations more frequently. The use of meteorological messages should be expanded, as little use is currently being made of this technique for improving accuracy of fires. In many of the units, insufficient attention is being paid to the necessity of conducting basic periodic tests of artillery weapons, and in a number of batteries the frequency of laying or checking the lay is significantly less than that which is prescribed for US units. Some general training deficiencies have been observed, but these are not difficult for the units to correct. Although the efficiency of

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the ARVN units in checking to prevent errors in firing varies from unit to unit, there is a general need for improvements in the area. A double-check system is important not only as a safety measure, but also as a quality-control tool for the commander. We have discussed these problem areas with commanders and advisors, and some progress has been realized. There is no question that the operational problems can be solved with little difficulty, due to the high caliber of leadership in the ARVN artillery in MRL. Although more difficulties will be encountered in the logistics areas, I am confident they can be satisfactorily resolved.

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CHANGE IN MISSION AND LOCATION OF XXIV CORPS

1. (C) On 9 March 1970, XXIV Corps became the senior US headquarters in Military Region 1, succeeding the III Marine Amphibious Force (III MAF). Just prior to assumption of the expanded mission the Corps headquarters and Corps Artillery headquarters displaced from Phu Bai to Da Nang. III MAF, the 1st Marine Division, and the Americal Division were placed under the operational control of XXIV Corps and the Corps assumed US responsibility for the southern MR1 (Quang Nam, Quang Tin and Quang Ngai Provinces). The 101st Airborne Division (AM), and the 1st Brigade, 5th Infantry Division (MECH) and the areas of operation in northern MR1 remained under Corps control. Although non-divisional type artillery units were present in the newly acquired areas, they were attached to the 1st Marine Division or remained assigned to the Americal Division. The decision was made not to request the immediate attachment of these units to Corps Artillery, as would be normal. Action to modify their command and control was deferred, pending the reorganization which would be required with future redeployments of major units from MR1.

2. (C) Substantive changes were made, however, with in the organizational structure of Corps Artillery. Prior to the change in mission, two 8 inch/175mm battalions, the 1st Battalion, 83rd Artillery and the 1st Battalion, 39th Artillery, had been attached directly to Corps Artillery. The 108th Artillery Group had controlled the remaining Corps Artillery assets. At the time of the expansion of the Corps mission, the 108th Group had control of the following units: The 8th Bn 4th Artillery and the 2d Battalion, 94th Artillery, both 8 inch/175mm battalions; Battery F, 26th Artillery, a target acquisition battery; and the 1st Battalion, 44th Artillery, an automatic weapons air defense battalion. The 1st Battalion, 44th Artillery had attached to it two non-organic batteries: Battery G, 29th Artillery (Searchlight) and Battery G, 65th Artillery (.50 Cal Machine Gun, Quad).

a. Changes were made to this organizational structure upon the movement of Corps Artillery headquarters to Da Nang. Since all four heavy artillery battalions were to remain in Northern Military Region 1 (MR1), (Quang Tri and Thua Thien Provinces), these units were attached to the 108th Artillery Group. The remaining Corps Artillery assets (the target acquisition battery, and the air defense automatic weapons battalion with its attached searchlight and quad .50 batteries) were placed under the direct control of Headquarters, Corps Artillery. This was done to facilitate the accomplishment of the general support mission of assigned to these units. Although the Corps Artillery did not gain additional subordinate units as a result of the expanded XXIV Corps mission, the activities of the headquarters as an element of the Corps staff were increased significantly. As the Artillery Officer for the Corps, the Corps Artillery Commander was responsible for coordinating all artillery matters in the Corps headquarters. The additional responsibilities in this regard were accomplished without difficulty. Prior to the actual change in status of the Corps, the Corps Artillery Commander and staff made liaison visits to the artillery elements which were to be affected by the change. These early contacts facilitated the integration of the activities

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of these artillery commands into the Corps. Reports were rendered promptly and correctly, and smooth working relationships were soon developed.

b. To aid in coordinating matters of interest to artillerymen, the liaison which was established before the expansion of the Corps was continued. Frequent visits were made by Corps Artillery personnel to the artillery elements of commands subordinate to the Corps. A regular series of artillery commanders' conferences was initiated. Invited to attend were the 101st Airborne Division Artillery and Americal Division Artillery Commanders, the commanders of the 11th Marine Regiment, the 108th Artillery Group and of separate battalions, as well as the I Corps Artillery, 1st ARVN Division Artillery and 2nd ARVN Division Artillery Commanders and the commander of the direct support artillery battalion of the 2d ROK Marine Brigade. Those meetings proved extremely valuable in providing for exchange of information of interest to artillerymen, for overall coordination, and for dissemination of the XXIV Corps Commander's concepts concerning the employment of artillery. We also instituted a regular monthly conference of artillery operations officers. The operations officers of the US commands represented at the commanders conferences discussed above were invited. Mutual problems and items of interest were discussed, as were current and proposed programs involving artillery units in XXIV Corps. These conferences were extremely valuable, particularly during the period immediately after the expansion of the Corps. They are being continued indefinitely.

3. (C) Communications.

a. Upon relocation of Headquarters XXIV Corps Artillery to Da Nang the primary means of voice communications to subordinate units was established through the area telephone system. This has proved to be satisfactory except for an occasional temporary loss of communications experienced due to enemy action, weather conditions, or other causes. Maximum effort has been made to meet communications requirements by utilization of existing common user facilities of the area communications system. Although this has been possible to a great extent, the mission of Corps Artillery has necessitated some exceptions. Due to the heavy reliance on communications systems in controlling and coordinating fires and in gathering and distributing intelligence information, a small number of reliable, high-priority, sole user circuits have been required to provide effective artillery support to maneuver elements. These circuits are under continuous review and evaluation with the purpose of keeping the number of dedicated circuits to a minimum.

b. The move of XXIV Corps Artillery resulted in a new organizational structure and geographical considerations. Liaison visits between communications and electronics officers of artillery units with the Corps and the Corps Artillery communications and electronics officer were carried out and resulted in a smooth reconfiguration of communications systems.

(1) Upon relocation of XXIV Corps Artillery, the Command/Fire Radio Teletype, Single Sideband Net (CF RATT SSB NET) was activated from Camp Horn, Da Nang. This secure radio teletype net linked XXIV Corps Artillery to major subordinate units and to other major artillery with the Corps units throughout MRI. It has provided the requisite means for passing classified narrative intelligence summaries and situation reports. It also is a method of maintaining operator proficiency and readiness, and serves as a principal back-up to fixed communication systems supporting XXIV Corps Artillery.

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(2) During the month of March 1970 the Wideband AUTOSEVOCOM terminal was established at Headquarters XXIV Corps Artillery. This terminal was homed off SECORD 71 Da Nang, which is maintained by Air Force units. The use of the AUTOSEVOCOM equipment, although not ideal in performance, has provided to the Corps Artillery headquarters a secure means of voice communications to other Corps units and to Corps Artillery subordinate units. One of the main purposes of this terminal has been to furnish secure voice communications to the 108th Artillery Group, where the location of this unit, in close proximity to the DMZ, frequently involves communications of a sensitive nature.

(3) A secure XXIV Corps Artillery Command/Fire Net (FM) was established to provide secure voice communications to subordinate units and to other artillery with the Corps. Of primary importance is that this net has provided a back-up to the AUTOSEVOCOM terminal and has been the primary means of secure voice to the majority of the units that do not have access to AUTOSEVOCOM facilities.

(4) Messenger Service to XXIV Corps Artillery units has been through utilization of the XXIV Corps daily air courier which was established upon movement to Da Nang.

(5) HHB, XXIV Corps Artillery, during the month of March 1970, assumed the mission of providing direct communications support to XXIV Corps Headquarters, Camp Horn Base Defense. At that time a cable project was developed and the unit wire communications personnel installed this system on the Camp Horn perimeter to all guard towers, connecting them to the security control desk switchboard. Since established, this system has provided a highly reliable method of telephone communications to the security guards and communications to sector control points for quick reaction during hostile attack.

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OPERATIONS

1. (C) XXIV Corps Artillery organization for combat and tactical missions.

a. The organization of XXIV Corps Artillery as of 31 August 1970 was as shown on the chart at Appendix 1. All heavy artillery units attached to Corps Artillery were located in northern Military Region 1 (Quang Tri and Thua Thien Provinces), and were attached to the 108th Artillery Group. Two of the battalions, the 8th Battalion, 4th Artillery and the 2d Battalion, 94th Artillery, were a part of the Group prior to the change in Corps location. The remaining two, the 1st Battalion, 39th Artillery and the 1st Battalion, 83d Artillery, had previously been attached directly to Corps Artillery. At about the same time the two additional heavy battalions were placed under control of the 108th Artillery Group, other units were taken from the group and attached directly to Corps Artillery. These were the 1st Battalion, 44th Artillery (Air Defense Automatic Weapons) with Battery G, 29th Artillery (Searchlight) and Battery G, 65th Artillery (Quad .50 Machine Guns) attached; and Battery F, 26th Artillery (Target Acquisition).

b. Tactical missions assigned to the Corps Artillery units are as follows:

(1) 108th Artillery Group: General Support, Reinforcing the 1st ARVN Division Artillery, the 101st Airborne Division Artillery, and the 5th Battalion, 4th Artillery. (The 5th Battalion, 4th Artillery is the direct support battalion assigned to the 1st Brigade, 5th Infantry Division (Mech)).

(a) 8th Battalion, 4th Artillery: General Support, Reinforcing the 5th Battalion, 4th Artillery.

(b) 1st Battalion, 39th Artillery: General Support, Reinforcing the 1st ARVN Division Artillery.

(c) 1st Battalion, 83d Artillery: General Support, Reinforcing the 101st Airborne Division (Ambl).

(d) 2d Battalion, 94th Artillery: General Support, Reinforcing the 1st ARVN Division Artillery.

(2) 1st Battalion, 44th Artillery: General Support.

(a) Battery G, 29th Artillery: General Support.

(b) Battery G, 65th Artillery: General Support.

(c) Battery F, 26th Artillery: General Support.

2. (C) Distribution of 175mm guns and 8 inch howitzers in XXIV Corps Artillery.

a. The configuration of heavy artillery battalions and batteries with respect to the number of assigned weapons which are 8 inch howitzers and 175mm guns is flexible. It is a relatively simple procedure to retube the basic chassis, and weapons can be converted as dictated by the tactical situation.

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However, it is particularly important to coordinate such changes with support agencies because of their effect on ammunition expenditures and the resupply of 175mm gun tubes. As a general rule, the tube distribution has remained relatively constant. Currently, all heavy battalions in Corps Artillery are composite; that is, each of them have both 175mm guns and 8 inch howitzers. Firing batteries are organized both as dual caliber and single caliber units. Currently, the distribution of calibers in Corps Artillery is as follows:

8 inch howitzer batteries: 5 each (20-8 inch how)

175mm gun batteries: 3 each (12-175mm guns)

Composite batteries (2-8 inch how and 2-175mm guns): 4 each (8-8 inch howitzers, 8-175mm guns)

b. The selection of caliber is based on the tactical situation and the availability of heavy artillery units in a given area. Although the problems associated with a composite battery are not particularly serious, units are normally organized as single caliber batteries if the mission can be performed as well in this configuration. This is usually possible if sufficient numbers of weapons are positioned in the general area to provide coverage of the area by both 175mm gun and 8 inch howitzers. This is the case when the level of enemy activity is such as to warrant the positioning of sufficient assets to obtain this coverage, and when an adequate number of positions are available. When only one battery is positioned to support an area, this battery will usually be composite. Advantages of equipping heavy artillery batteries with a single caliber are: a less complicated gunnery problem, easier ammunition management, and a capability to deliver a greater volume of fire on targets which can be attacked by only one caliber. These advantages are outweighed, however, when the positioning of only a single caliber would cause a lack of needed 8 inch or 175mm coverage in a given area.

c. The Americal Division uses generally the same concepts of employment of heavy artillery as that discussed above. The three batteries of the heavy artillery battalion attached to the Division are all organized as composite batteries, and are positioned in westward locations to take advantage of the fire capabilities of the 175mm guns. The 8 inch howitzer battery of the composite 155mm/8 inch battalion are positioned by platoon to support operations nearer the coast.

d. The 1st Marine Division has the equivalent of two heavy artillery battalions (two 6-gun 175mm batteries, and two 6-howitzer 8 inch batteries). The distribution of tubes in these units remains constant; flexibility is achieved by extensive employment by platoon.

3. (C) Management of Heavy Artillery Ammunition.

a. The period saw a substantial increase in heavy artillery ammunition expenditures in Military Region 1. This was the result of significantly increased enemy activity, particularly in the northern two provinces. Most of the heavy artillery weapons were positioned to be capable of firing deep into areas where the only significant ground forces were those of the enemy. Heavy artillery was used to prevent uninterrupted enemy activity in these areas, and

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to attack logistics installations, bivouac areas, and defensive positions. Fires for this purpose were delivered from heavy artillery units positioned at the western most occupied fire bases. In the northern two provinces, the range capability of heavy artillery was periodically extended by the movement of the heavy artillery units to the west of normally occupied bases. These "artillery raids" were designed to strike enemy-held areas which were normally immune from artillery attack. The objectives of the fires were the same as those regularly delivered from permanent fire support bases. Of course, the heavy artillery units were simultaneously engaged in their normal role of reinforcing the fires of other units, and in supporting specific operations.

b. During the period from March to June, XXIV Corps Army Artillery expenditures increased from 200 thousand to 486 thousand rounds per month. By mid-May the expenditure rate greatly exceeded the theater sustaining rate, and on 11 June it became necessary for USARV to allocate artillery ammunition throughout Vietnam. Since allied forces were initiating operations in western MR1 during this period and with further increases in enemy ground attacks and attacks by fire it was recommended that heavy artillery ammunition in particular not be allocated. This allocation was continued due to the critically low stockage level of heavy artillery ammunition and increased budget constraints. As a result of this reduction in artillery ammunition available, it became necessary to review the policies governing the utilization of supporting fires. XXIV Corps directed its units to ensure that only valid targets be engaged by the proper type and amount of fire support which provides the desired effects. Emphasis was placed on the traditional role of heavy artillery as used against targets beyond the range capability of light and medium artillery and against hard targets requiring highly accurate and destructive fire. Fleeting targets and other missions requiring rapid reaction were directed to be engaged by light and medium artillery. Artillery commanders and other fire support elements at all levels were enjoined to determine the most efficient way to manage the application of fire power and to employ the best fire support means in an engagement.

c. The emphasis placed on the management of artillery expenditures contributed to the reduction of ammunition consumption. Ammunition expenditures for July dropped to 283 thousand and August's expenditures were 234 thousand. Heavy artillery expenditures have decreased at an even greater rate and are remaining consistently below the allocation. This reduction in heavy artillery expenditures is based on the fact that heavy artillery will no longer be the primary means of attacking enemy supplies and facilities in the western areas. However, as US troop redeployments continue, the requirements for heavy artillery support by ARVN forces will increase as will the need for heavy artillery fires in the western AO when friendly units are again no longer able to operate in these areas.

d. Expenditures on interdiction targets have been eliminated; however, USARV has directed that acquired targets be carefully evaluated to ensure that the high percentage of ammunition expended in this category is justified. 108th Artillery Group has been directed to challenge all acquired targets to ensure that only valid and timely targets are engaged.

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e. At the request of Headquarters, USARV, a 6-month forecast of ammunition expenditures is now being prepared monthly. Headquarters, XXIV Corps had already instituted a requirement for forecasts from subordinate units in an attempt to establish an improved ammunition management system.

f. Ammunition is accounted for chiefly through the data received in the daily artillery situation report submitted by all artillery units in MRL. This report furnished information on expenditures according to caliber, target type, and area of operation. This information is presented weekly at the Corps Artillery briefing and monthly to the XXIV Corps Commander. A monthly report on the expenditures of US Army Artillery units is sent to USARV. Additionally, a detailed monthly compilation is dispatched to XXIV Corps Headquarters and all major units in MRL.

4. (C) Employment of Air Defense Automatic Weapons.

a. Air Defense Automatic Weapons in the Military Region I have a general support mission. These weapons are deployed solely in the ground support role; however, they do maintain a limited air defense capability.

b. The 1st Battalion (AW), 44th Artillery is the only Air Defense Battalion in XXIV Corps. It has been deployed principally in the north, from strong points along the DMZ southward to Hill 55 in central MRL with one battery recently deployed in the Americal Division area of operation. The battalion consists of 4 batteries, each with 16-M42A1 self-propelled twin 40mm automatic guns (L-1003). Battery A is deployed chiefly along the DMZ; Battery B was redeployed to Quang Nam Province in support of Marine and GVN forces by 5 September; and Battery C was deployed on 20 July to suitable fire bases and base camps generally in support of GVN forces located in the Americal Division area of operations. Battery D is deployed west and south of Phu Bai. G Battery, 65th Artillery (Quad .50 Machine Gun) attached to the 1st Battalion, 44th Artillery consists of 24-M55 Quad .50's. It is deployed throughout northern MRL in two modes: Vehicular mounted on 5-ton trucks or on ground mounts for airmobile operations. Separate from the 1st Battalion, 44th Artillery is Battery G, 55th Artillery which is another Quad .50 Battery attached to the Americal Division and deployed in a similar manner throughout that Division's area of operations.

c. Generally, the 1st Battalion, 44th Artillery is deployed in accordance with the following priorities:

- (1) Fire Bases containing heavy and medium artillery.
- (2) Strong Points along the DMZ.
- (3) Key terrain along major routes of communications.
- (4) Base camps with divisional or brigade headquarters.

d. Elements of the 1st Battalion, 44th Artillery have filled a variety of roles. Primarily they have been utilized for perimeter defense, supplying a high volume of protective fires directed at acquired, confirmed and

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counterbattery targets. At larger base camps, automatic weapons are positioned concurrently on the perimeter and at a central location as a ready reaction force. Both the direct and indirect fire capabilities have been utilized. During ground attacks these weapons have proven invaluable in preventing the penetration of defensive perimeters. Several new concepts were developed and found quite successful. They involved such target detection and acquisition devices as the searchlight, night observation device, integrated observation system, and sensors, coordinated with dusters and Quad .50's. Automatic weapons have also been employed on offensive operations in support of infantry, and on artillery raids to provide security and short range high explosive fire. Mine sweep security and convoy escort duties are also performed on a regular basis.

5. (C) Employment of Searchlights.

a. Battery G, 29th Artillery is the only searchlight battery in XXIV Corps. Its assets are divided into 3 platoons which are located in MRL. Control of the separate platoons is decentralized as much as possible to achieve maximum flexibility in employment. The battery consists of 36 searchlights.

b. The 23 inch Xenon searchlight provides battlefield illumination primarily for ground forces located in static positions. These lights are mounted in towers, on 1/4 ton trucks, or on CONEX containers as a part of SCAMS (self-contained airmobile searchlight). SCAMS, a rapidly deployable unit containing a searchlight, a generator, and all necessary field equipment for the crew, is a recent innovation in XXIV Corps.

c. The searchlight can provide a variety of functions:

(1) Visible light is used along the perimeters to aid surveillance and to counter possible enemy probes.

(2) Infra-red light is used to detect enemy movement, increasing the capability of night observation devices by scanning the perimeter much in the same manner as with white light. When this method is used the enemy is not aware that he has been detected.

(3) Both infra-red and white light are used to investigate reports of enemy movement.

(4) White light is used to mark enemy positions for engagement with direct fire weapons.

6. (C) Friendly Fire Incidents.

a. Headquarters, XXIV Corps Artillery reviews and recommends action to CG, XXIV Corps on all mortar, artillery and AFA accidents and incidents investigated under provisions of USARV Reg 525-7 which occur in MRL. In addition, non-army incidents are monitored in order to provide a broader basis for analysis of problem areas and trends.

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b. An upsurge of incidents occurred during the months of March and April, 1970. An analysis of the reasons revealed that the prominent cause of artillery and mortar incidents was carelessness, not a lack of training. Command emphasis was placed on the need for care in all phases of gunnery, and when necessary, more stringent control and supervision was exercised. In a few instances, where warranted, stricter disciplinary actions were taken. A large number of the accidents were a result of inadvertant entry of civilians or friendly units into cleared areas. Although this sort of accident is frequently unavoidable, a degree of prevention was assured through strict observance of the policy of withholding clearances for unobserved missions within 1000 meters of friendly locations. Accidents involving Aerial Field Artillery (AFA) generally occurred during close support missions in which friendly units received casualties from rockets which impacted in close proximity to their positions. The ground commanders in each case felt that the firepower received was worth the added risks involved. The most frequent errors encountered involved friendly positions not being adequately marked. Ground commanders have been advised of the added precautions necessary in employing AFA.

c. The command actions which were taken appear to have been effective; a significant decrease in artillery incidents has been observed during recent months.

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XIV CORPS ARTILLERY ORGANIZATION FOR COMBAT

CORPS ARTILLERY	CORP	1/5	101st	AVCL	1st MAR	1st ARVN	2d ARVN	QPSZ	ROK
1/44 (G/29, 65)	.50 cal SL	GS	GS	GS	GS	GS	GS	GS	GS
P/26	TAB	GS	GS	GS	GS	GS	GS	GS	GS
	1/39	8"	175			GSR			
	1/83	8"	175		GSR				
108th	8/4	8"	175		GSR				
	2/94	8"	175		GSR				

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APPENDIX 1

HEAVY ARTILLERY RAIDS

1. (U) GENERAL. Heavy Artillery Raids were found to be a most effective means of employing heavy artillery units to engage targets normally not within artillery range of fire support bases. The raids in which Corps Artillery units participated varied in duration from a few hours to several days. The raiding force varied in size from one or two weapons to a multi-battery force in combination with Aerial Field Artillery and Tactical Air. (A listing of the heavy artillery raids which were conducted is given in Appendix 1.) Much of the planning and coordination required for the successful execution of an artillery raid is standard artillery practice, and is well documented in doctrinal publications. The following information is intended to supplement published doctrine with the lessons learned from actual operations by Corps Artillery units.

2. (U) PLANNING.

a. Since many of the targets which lend themselves to attack during an artillery raid may be relatively fleeting in nature, the reaction time for execution of the raid must be as short as possible. Standing operating procedures which are flexible enough for application to raids of varying types and durations should be developed, and detailed checklists should be prepared.

b. When notification of an impending raid is received, detailed planning must begin immediately. A written operations plan or order should be prepared, and external support requirements must be identified. The resources to satisfy these requirements should be requested as soon as possible. When the units providing the support are tasked, their representatives should participate in the remainder of the detailed planning. In an instance where a combined US and ARVN force is involved, mutual participation throughout the planning stage is particularly desirable.

3. (U) COMMAND AND CONTROL. The organizational structure of the raiding force will be dependent upon the size of the force involved as well as the tactical situation in the area where the raid occurs. For raids involving one battery or less,

existing command relationships will usually be adequate. Although supporting forces will not normally be under the command of the artillery commander, close coordination during the planning and execution phases of the operation can alleviate most of the difficulties inherent in the lack of unity of command. For multi-battery raids, the formation of a task force is the preferred method of command and control, particularly when participating units are from different battalions. In instances where this is not feasible centralized operational control is essential, and must be clearly agreed to by all parties concerned.

4. (U) FIRE PLANNING. Targets for heavy artillery raids by Corps units will normally be provided by Corps Artillery Headquarters, with participation by the division or brigade in whose sectors the fires are to be placed. When scheduling the fires of heavy artillery, consideration should be given to traverse limits in order to preclude unnecessary re-laying. One method which has proved successful in coping with this problem is the scheduling of targets in blocks, with all the targets in a given block falling within limits of a single azimuth of lay. For purposes of surprise, the sequence of firing within the blocks may be varied as desired, and an entire block or any part of it may be engaged more than once. The only requirement is that sufficient time be allowed for laying the battery between firings on blocks of targets which cannot be engaged from the same azimuth of lay.

5. (U) COMMUNICATIONS. Depending upon the duration and scope of the raid, varying additional communications requirements will be encountered. If the raiding artillery element consists of only a portion of a battery, with a small security force and some aerial support, the communications needs might well be met from organic resources of frequencies and equipment. If, however, a multi-battery force is deployed over a period of several days into an area not normally occupied by friendly elements, the additional communications needs may become extensive. In one operation the following nets were used with success:

- a. Task Force Command Net
- b. Fire direction net
- c. Grid clearance and fire coordination net
- d. Air control net
- e. Air warning net
- f. Air Cavalry control net
- g. Base defense net
- h. Convoy and movement control net
- i. Task force secure net

6. (U) FIRE SUPPORT COORDINATION. The Fire Support Coordination Center (FSCC) is an integral part of any successful artillery raid. By working closely with the forward Fire Direction Center at raid locations, it insures that the proper amount of fire is placed on the correct target at the right time. In addition, the FSCC disseminates warnings and other fire support coordination measures that affect friendly aircraft, troop, and installation safety during the execution phase of artillery raids. In artillery raids calling for preplanned targets only, pre-clearance can normally be gained from the appropriate area of operation fire support coordination agency, thus making the forward FSCC optional. When planning an artillery operation that calls for a large target list and/or visual reconnaissance for targets of opportunity, past experience has shown that the forward FSCC becomes a necessity in order to facilitate and expedite the raid artillery fires. With the FSCC consisting of an air warning control element, air-ground control element, aerial field artillery liaison, liaison from AO of operation, ARVN liaison assistant S-3 from the participating artillery battalion, and a net control station, its contribution to artillery raids located in remote areas has proven invaluable. One of the key members of this team is the liaison officer from the area of operation. His awareness of existing locations and ability to grant on the spot clearance is vital to the success of the operation.

7. (U) FIRE DIRECTION. The organization for providing firing data to the raiding artillery units will vary with the circumstances of the raids. If the raid is to be conducted by only a portion of a battery, the fire direction capability might well be provided by the battery (-) at its normal location. In this case, the battery FSC produces firing data in the normal manner and makes the routine data check with the battalion FSC. Fire commands are relayed by radio to the executive officer's post established at the raid firing position. Although this method is suitable for small raids, the radio traffic necessary to sustain such an operation over more than a few hours would normally be unacceptable for larger operations. When the raiding force is the size of one or more firing batteries, a separate FSC for each battery at the raid location is necessary. If more than one battery is involved in a raid, the participating units may well be from different battalions. When this is the case, consideration should be given to the establishment of a raid FDC under the control of a staff officer of one of the battalions. The alternative of using one of the battalion FSC's to check the firing data of all participating units is of course feasible under some circumstances, particularly if the normal volume of fire of the parent battalion (-) is relatively small. In any event, it is mandatory that fire direction personnel be given extensive training in the peculiarities of any participating weapons systems with which they have had little or no previous experience.

8. (U) MAINTENANCE. The requirement for maintenance support for the raiding force should be carefully examined as far in advance of the raid as possible. Consideration must be given to the fact that a raid usually involves a much higher rate of fire than most Corps Artillery units regularly experience. Therefore, the time interval between equipment failures will probably be shortened considerably. Spare parts should be taken to the raid firing position, along with qualified maintenance personnel. A contact team from the supporting maintenance unit has proved to be extremely valuable in the past, and should be obtained if at all possible. Tubes of 175mm guns taken on the raid should have most if not all their tube life remaining. If one or more guns become nonoperational during the raid, a larger number of rounds than expected might be fired through the tubes that remain operational. If the raid is to be more than a few hours in duration, one or more replacement tubes should be positioned with the firing elements, or in a location from which they can promptly be delivered to the firing position.

Recovery vehicles must accompany the units during road marches, and should remain in the position during firing to provide an on-site lifting capability and a towing capability for vehicles which become non-operational and are to be evacuated before the termination of the raid.

CONFIDENTIAL**APPENDIX 1 Listing of Raids**

The heavy artillery raids by Corps Artillery units are listed below.

<u>UNIT</u>	<u>TUBES</u>	<u>FROM</u>	<u>TO</u>	<u>INCLUSIVE DATES</u>
B/5/175 USMC B/34th ARVN	4/175SP 4/155T	CP Carroll Cp Carroll	Elliott	27 Dec 69 - 29 Dec 69
B/2-94	2/175SP 2/8"SP	Gia Le	Anne	6 Jan 70 - 11 Jan 70
A/6-33 B/5/175 USMC	3/105T 6/175SP	A-4 CP Carroll	Elliott	14 Jan 70 - 16 Jan 70
A/1-83 C/2-94	2/175SP 2/175SP	Nancy Nancy	Anne	15 Jan 70 - 19 Jan 70
A/6-33 B/5/175 USMC	3/105T 6/175SP	A-4 CP Carroll	Ca Lu	16 Jan 70 - 25 Jan
A/2-94	2/8"SP 2/175SP	Sally	Skm SW of Nancy	21 Jan 70 - 25 Jan 70
A/1-39	2/155SP	Evans		
A/1-39 B/1-83 C/1-83	2/155SP 2/175SP 2/175SP	Evans Sally Sally	SW Jack	28 Jan 70 - 31 Jan 70
B/1/175 USMC C/6-33	4/175SP 2/105T	CP Carroll Fuller	Ca Lu	28 Jan 70 - 31 Jan 70
A/8-4	2/8" 2/175SP	CP Carroll	Elliott	25 Feb 70 - 26 Feb 70
B/8-4	2/175SP	C-2		
B/1-83 C/1-83	2/175SP 2/175SP	Birmingham Sally	2 km west of Jack	9 Feb 70 - 11 Feb 70
A/2-94 C/2-94	2/175SP 2/175SP	Sharon Nancy	Anne	12 Feb 70 - 14 Feb 70
B/1-83	2/8"	Birmingham	Vehgel	7 Mar 70 - 9 Mar 70
B/1-83 C/1-83	3/8" 1/8"	Vehgel	Blade	28 Jun 70 - 28 Jun 70

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NAVAL GUNFIRE

1. (C) Since November 1969, naval gunfire has averaged 10,000 rounds per month in support of Allied Forces in Military Region 1. On 15 April 1970, naval gunfire ship monthly availability was reduced from 60 to 40 ship days. At least one ship was in MR 1 for the month, with an additional ship for 10 days during the month. The First Air Naval Gunfire Liaison Company (ANGLICO) recognized the enemy threat in MR 1 and gave this area priority on ships with heavy armament. The longer range of the 5"/54 permitted engagement of targets that were not accessible by other naval surface fire support means. In May, June, and July a heavy cruiser, armed with nine 8" and ten 5" guns, complemented the destroyers on the gunline. Priorities of naval gunfire support in MR 1 were developed based on availability of targets, the enemy threat, and available fire support. Using this criteria, the DMZ was given priority and a ship was positioned in that area 99 per cent of the time.

2. (C) On 9 March 1970, concurrent with the expansion of the Corps area of operation, Sub Unit One, First ANGLICO, assumed operational control of Naval gunfire support ships in Military Region 1. With the reduction of assets allocated, the number of ANGLICO teams were reduced from 5 to 3. As of 1 July, ANGLICO has teams located at Quang Tri, in support of the 1st Brigade, 5th Infantry Division (Mech) and the 1st ARVN Division Forward; at Chu Lai, in support of the Americal Division and 2d ARVN Division, and at XXIV Corps Headquarters in Da Nang. Other units in the MR1 are supported by ANGLICO teams on a request basis. Spotting for the Da Nang area is accomplished by teams organic to the First Marine Division.

3. (C) To reduce the effect of the decrease in ship days, Coast Guard ships on Market Time Patrol (coastal surveillance) off the coast are used on an "as available" basis.

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INTELLIGENCE AND TARGET ACQUISITION

1. (C) a. In a Republic of Vietnam-type combat environment, target acquisition is of utmost importance. Because massed enemy forces remain vulnerable to detection and subsequent destruction by artillery bombardment, AFA, tactical air, B-52 strikes and combat assaults, the enemy continues to avoid heavy concentration of his forces to reduce the effectiveness of Allied fire power. Enemy tactics and the varied terrain in the XXIV Corps area of operations present particularly challenging target acquisition problems.

b. The terrain in the XXIV Corps area of operations is characterized by three distinct and different terrain types. The narrow, coastal lowland along the South China Sea and the Gulf of Tonkin serves as the home for most of the civilian population in Military Region 1. The western portion of the XXIV Corps area of operations is a mountainous area with double and triple canopied jungle and almost impenetrable undergrowth. During the northeast monsoon, military operations in this area are generally limited to reconnaissance operations and interdiction by heavy artillery and air operations. Separating the mountainous area in the west and the coastal lowlands to the east is the piedmont area of gently rolling hills. It is in this area that many of the target acquisition assets are employed, assisting in denying the enemy easy access to the heavily populated lowlands.

c. Military Region 1 is divided into two distinct geographical areas, Quang Tri and Thua Thien Provinces in the north and Quang Nam, Quang Tin, and Quang Ngai Provinces in the south. These north and south areas are separated by a mountain ridgeline extending from Laos to the Gulf of Tonkin. Similar east-west ridgelines in the southern portion of Military Region 1 provide well defined enemy avenues of approach from his mountain base areas into the populated lowlands. These ridgelines also provide excellent observation post locations for friendly forces and are used extensively for this purpose.

2. (C) a. In the area in extreme northeastern Quang Tri Province, known familiarly as Leatherneck Square, traditional target acquisition devices have been emplaced, generally along the southern trace of the demilitarized zone (DMZ). Flash bases have been established and countermortar and ground surveillance radars emplaced. These target acquisition devices have provided invaluable counterfire information as well as providing surveillance of the eastern DMZ and North Vietnam during periods of darkness and reduced visibility. Sound bases are also employed from time to time as required.

b. Aerial target acquisition is essential to compliment other target acquisition sources. The acquisition capability of forward observers with maneuver forces

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in the west is generally handicapped by the heavy jungle undergrowth and limited fields of observation. Aerial observation in the DMZ is limited by the requirement to fly south of the Provisional Military Demarcation Line (PMDL). Despite these limitations, the use of aerial observers has provided a significant contribution to the artillery intelligence effort by maintaining coverage of areas habitually used as staging areas and infiltration routes by the enemy.

c. Throughout the remainder of the XXIV Corps area of operations, target acquisition devices are generally emplaced on prominent terrain features which permit surveillance of known or suspected enemy avenues of approach into the populated lowlands. Countermortar radars are generally positioned to provide optimum protection for key installations and combat bases.

d. Unattended ground sensor (UGS) devices have made a major impact in the field of target acquisition as well as intelligence collection. When possible sensor fields are planned and emplaced with fire support capabilities in mind. This provides a basis for bringing accurate, destructive, surprise fire on enemy troop movements and assists in area denial operations and isolation of the battlefield. The artillery must actively participate in sensor employment planning to insure that, where possible, artillery kill zones are established. Of utmost importance is the timeliness of response to target detections, integrated with the entire gunnery problem. It is only thus that maximum effectiveness of artillery response can be achieved.

e. The introduction of the Integrated Observation System (IOS) into the family of target acquisition devices has produced outstanding results. The accuracy achieved by the combination of the laser range finder and azimuth-elevation head generally allows first round fire-for-effect missions. The night observation device (NOD) has proved of limited value because of its short range. The use of a searchlight equipped with an infrared filter can greatly increase the range of the NOD. In southern Military Region 1, the cross-compartmentation caused by lateral ridgelines extending into the lowlands provides well-defined, narrow avenues of approach and excellent IOS positions. The operation of the IOS is not difficult. It has been found that a three to five day course is adequate for operator training. Of utmost importance is the necessity for a detailed, systematic search of the target area and frequent change of operators.

f. The key to effective employment of target acquisition devices is close and continuous coordination, not only with the supported force, but with other mutually supporting target acquisition agencies as well. Sectors of search, coverage, and operating times must be based on the best local intelligence available in order to maximize the inherent limited capabilities of present day target acquisition devices. A continuing study of enemy attacks-

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by-fire is essential in the development of effective countermortar and counterrocket programs.

3. (C) XXIV Corps Artillery operates a Survey Information Center (SIC) for use by all elements of XXIV Corps. Copies of the computations of all fourth order survey conducted by subordinate commands are forwarded to the SIC. The adjusted survey data is then returned to the unit involved, forwarded to the Geodetic Information Center at USARV and retained on file in the SIC. The survey data on file in the SIC then forms the basis for subsequent changes to the MR 1 Trig List, the most recent of which was published in May 1970. For this change, 1700 computation checks were made using the FADAC computer.

4. (C) XXIV Corps is required to submit timely and accurate reports on all incidents of enemy activities in the DMZ to the MACV, MR 1 Desk. DMZ incidents are targets detected and engaged in the DMZ while sightings are targets detected and not engaged. Acquisition devices used to locate these enemy intrusions into the DMZ include sensors, ground surveillance radars, integrated observation systems, aerial observers, long range patrols and other intelligence sources. In order to collect and disseminate this information, reporting channels have been established at the 1st Brigade, 5th Infantry Division (M) (SEP) and XXIV Corps TOC. The 1st Infantry Division (ARVN) is encouraged to provide Sighting/Incident reports to the 1st Brigade, 5th Infantry Division (M). Because of the sensitivity of the DMZ area, all data and reports must be submitted as accurately and expeditiously as possible and verified when possible. The FSCE of the XXIV Corps TOC prepares outgoing messages and checks for accuracy of data and correlation with engagements in the area. The G2 element of the TOC screens these reports for order of battle information and the G3 for the effect these sightings or incidents may have on future operations.

5. (C) Since much of the artillery fire delivered in the XXIV Corps area of operations is unobserved or fired "danger close", the most accurate firing data possible must be developed. It has been found that the Metro Quality Control Team has provided a valuable contribution in this respect. The team makes a detailed examination of a representative sample (10 percent) of metro flights flown daily in the Corps area. Any discrepancies are brought to the attention of the appropriate commander concerned. Results are published monthly in a Metro Newsletter and distributed to all concerned. In a Vietnam-type combat environment, metro stations quite often must operate on an area basis rather than a unit basis. A continual evaluation of metro station locations must be made and sections relocated when necessary through command coordination.

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6. (C) The Target Information Center has proved to be an effective means of collection and dissemination of hard or non-fleeting type target information for use by all units in XXIV Corps. Target information is collected from all sources and distributed in the form of a monthly target list. Daily changes are published in the XXIV Corps Artillery Daily Intelligence Summary. Entries are deleted from the target list based on correlation with battle damage assessment reports or age of the target. Special target lists for special operations such as artillery raids have been produced including all type of targets. Since November 1969 over 9200 targets have been processed by the Target Information Center. Extensive use is made of the G2 Arclight Section target data base as a source of targets for special operations. Supplemental targeting is developed by the G2 Imagery Interpretation Section upon request.

7. (C) As US combat troops are withdrawn from the Republic of Vietnam, increasing emphasis must be placed on the use of artillery fires in the economy of force role. The successful execution of this mission depends in large measure on the effectiveness of the target acquisition mission. Detailed planning and aggressive, determined execution is necessary for the successful accomplishment of the target acquisition mission.

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UNATTENDED GROUND SENSORS AS TARGET ACQUISITION DEVICES

1. (C) Unattended ground sensor (UGS) devices have made a major impact in the field of target acquisition, as well as intelligence collection. UGS strings within artillery range should be planned and emplaced with fire support capabilities in mind. This greatly enhances our ability to bring accurate surprise fire on enemy troop movements. UGS fields can be an excellent means of achieving canalization, area denial or isolation of the battlefield.
2. (C) The data from many UGS employed along the DMZ and in western Quang Tri and Thua Thien Provinces are air relayed for readout at Quang Tri by the Air Force DART. The majority of the UGS are located throughout the lowlands and piedmont areas and are readout by Army ground monitor sites. UGS are used principally to monitor infiltration routes and areas of high enemy activity.
3. (C) The methods of engaging UGS targets by artillery vary in MR 1. In some instances the ground readout sites (monitors) are positioned in central locations such as brigade or regimental Fire Support Coordination Centers. Other monitors are positioned in the immediate vicinity of a firing battery FDC. Experience has not indicated the existence of a single optimum method for coordinating the attack of sensor targets, but some overall principles have become evident.
4. (C) UGS which are to be used for artillery target acquisition must be emplaced in coordination with artillery agencies. The UGS strings should be so located that the terrain will aid in canalizing enemy movement into selected kill zones. Following implant, artillery forward observers or UGS implant team members must immediately adjust on the kill zones to give a high assurance of first round accuracy. More than one kill zone should be established at each end of the string to provide for different target movement rates and artillery reaction times.
5. (C) Communications between UGS readout sites and the firing elements must be quick and reliable. If necessary for effective coordinating of fires, the reported detection information may be routed through a central fire control agency, but delays must not be allowed to develop.
6. (C) Generally, the smallest caliber of artillery capable of attacking a given UGS target should be used. Timely response is far more critical than sheer volume of fire power. The delay often associated with repositioning heavy artillery weapons is a serious disadvantage to their use in attacking

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UGS targets unless proper distant kill zones are established. One positive means for assuring adequate heavy artillery responsiveness is to dedicate specific weapons to specific targets and keep them laid in the proper direction. However, except in the case of areas with very high frequency of activity, this is an inefficient use of heavy artillery resources because of other higher priority requirements.

7. (C) When planning the engagement of UGS targets by artillery, emphasis should be placed on obtaining a high volume of fire in a short period of time. Preferably, at least one entire battery volley should be placed on the target; since the effect of subsequent volleys is considerably reduced, the firing of more than one volley is not normally warranted.

8. (C) Every effort should be made to obtain advance clearances to fire on UGS kill zones. Delays for purposes of obtaining ground clearances will effectively negate even the best system for coordinating fires on UGS targets. In the firing units, the maximum possible degree of planning for attack of UGS detected targets must be accomplished. Firing data for the targets should be precomputed and then updated when new registration or meteorological corrections are determined.

9. (C) Successful artillery engagement of the enemy in UGS kill zones is dependent on the average speed of the target and the distance from the UGS reported to the intended kill zone. Use of these two factors results in a Time On Target which is to be used. If delays are encountered, then a new TOT must be computed to the next usable kill zone. The timeliness of artillery fire can be greatly enhanced if the fire were "at my command" and an additional UGS were located immediately short of each kill zone to determine when the order to fire should be given.

10. (C) When possible, consideration should be given to the integration of UGS with other target acquisition devices such as radars and integrated observation systems (IOS). Experience has shown that sensors are excellent for initial target detection, with verification and/or more precise locations being provided by the other systems. The unobserved UGS string employment is more appropriate for intelligence collection than for target acquisition.

11. (C) Accurate battle damage assessment of UGS targets is limited because of the difficulty of conducting immediate visual reconnaissance or ground sweeps in the remote areas where they are often employed. The enemy thus has time to remove his equipment and casualties from the battlefield. Nevertheless, there is evidence that UGS have been very effective in the warning, intelligence collection and target acquisition roles. Information obtained from prisoners by the Interrogation Prisoner of War (IPW) sections at Headquarters XXIV Corps indicate that the enemy greatly fear suspected or known UGS fields and avoid them whenever possible.

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**DEPARTMENT OF THE ARMY
HEADQUARTERS, XXIV CORPS
APO San Francisco 96349**

AVII-CG

23 June 1970

SUBJECT: Policy on Ammunition Expenditures

**TO: Commanding General
23d Infantry Division (Americus)
APO 96374**

**Commanding General
101st Airborne Division (Airmobile)
APO 96383**

**Commanding General
1st Brigade, 5th Infantry Division (Mechanized)
APO 96495**

**Commanding Officer
XXIV Corps Artillery
APO 96349**

1. (U) The purpose of this letter is to set forth my policy on the expenditures of artillery ammunition and optimal utilization of supporting fires.

2. (U) The weighted application of timely and accurate firepower is one of the primary methods the commander has to influence the course of any action. With the continuing withdrawal of US Forces from Vietnam, proper use of available firepower becomes increasingly important. Since we possess a definite advantage in firepower, proper integration of all fire support systems and judicious use of the assets available can maximize this advantage in support of US and RVN operations.

3. (C) In order to apply this firepower advantage more effectively, thereby producing the required effect and considerably reducing the cost, the following steps will be taken in your application of artillery fires:

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SUBJECT: Policy on Ammunition Expenditures

a. Each target must be analyzed to insure that only valid targets are engaged and that these are engaged with a sufficient amount of the proper type of fire to ensure destruction or neutralization; while at the same time exercising intelligent restraint in the interest of resource management.

b. Because of their rapid response, light or medium artillery are more appropriate than heavy artillery to attack most counterfire targets in this environment. Further, the amount of fire placed upon a counter fire target should reflect the validity of the target, i.e. suspect or confirmed, and the timeliness of response. A confirmed, active mortar, promptly engaged should be subjected to massive counterfire by one or more volleys. However, the application of a similar amount of ammunition to a suspect location, especially if fired significantly after an enemy attack, would be poor resource management.

c. Fleeting targets, and targets of opportunity, such as sensor targets, must be attacked by the most responsive means available. The amount of ammunition expended on a target should consider the fact that the maximum killing effect is obtained with the first volley, while the effects of subsequent volleys rapidly diminish. Therefore, attack of these types of targets will normally be by light and medium artillery. Heavy artillery should be used only when the use of light and medium weapons is not feasible.

d. In view of the above, the positioning of artillery must take into account the probable targets to be engaged and expected location of those targets. Light and medium artillery should be employed in support of those maneuver forces which are positioned to counter the primary enemy threat. This positioning must recognize the increasing role of territorial force artillery for population security and the maneuverability of light and medium artillery, both ARVN and US, which allows rapid response to contingency situations.

Heavy artillery should be employed in its traditional reinforcing role to attack those long range targets beyond the range capability of the light and medium artillery, and hard targets requiring the greater accuracy or destructive power peculiar to the larger caliber.

e. It is necessary, in the case of unobserved fires, to insure that ammunition is not wasted and that such fires are not counterproductive. Only those unobserved targets supported by valid, timely intelligence should be engaged. Indiscriminate firing designed merely to harass the enemy will not be condoned.

f. Centralized control of all fire support means within the scope of each level of command is the most efficient way to manage the application of firepower. The fire support coordination element at each level: maneuver battalion, brigade, or division should be so organized and employed that the best fire support means is selected to

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SUBJECT: Policy on Ammunition Expenditures

engage the target at hand. Your attention is directed to those specific responsibilities of the fire support coordinator which call for:

(1) recommending the amount and type of firepower employed on each surface target to ensure maximum results are achieved from minimum expenditure of resources.

(2) recommending artillery positions to optimize the fire support available.

4. (U) Only through the economic and judicious use of our lessening resources can we maintain the battlefield advantage in firepower which we now enjoy. These policies are not new, but merely represent a formal statement for the information and compliance of the members of XXIV Corps, assigned, attached and SUPCOM units. I request that you give this matter your immediate and continued attention.

JAMES W. SUTHERLAND, JR
Lieutenant General, USA
Commanding

CF: CG, I Corps
CG, III Marine Amphibious Force
CG, 2d ROK Marine Bde
DaNang Support Command

Joseph W. Corder, Jr.
"A TRUE COPY"
JOSEPH W. CORDER, JR.
Major, FA

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Good morning, Mr. Secretary. As Commanding Officer, XXIV Corps Artillery, I would like to brief you on US heavy artillery support and ammunition expenditures in XXIV Corps. The heavy artillery units located in XXIV Corps are as shown on this chart. (Orgn Chart)

In southern I Corps Tactical Zone, the one heavy artillery battalion plus the 8" battery due to the peculiar evolution of command relationships in the area, are now attached to the Americal Division. However, when the division is redeployed, these heavy artillery units will remain in Vietnam and come under XXIV Corps Artillery control.

In central I Corps Tactical Zone, there are four fleet Marine Force heavy batteries, which are the equivalent of two army battalions. Upon the departure of the Marine batteries during future redeployment phases, Army tubes will have to be shifted south to cover the area now occupied by the Marines, with an increase in expenditures of Army funded heavy artillery ammunition.

In Northern I Corps Tactical Zone all heavy artillery is assigned to the 108th Artillery Group.

(Southern I Corps) Map

In southern I Corps the 8" battery is split between two fire support bases near the coast. The heavy battalion has its composite 8"/175 batteries located further west in civilian irregular defense group camps at Minh Long (Point), Tra Bong (Point), and Tien Phuoc (Point). The arcs depict the maximum range fire capability of these units. Ammunition expenditure rates for the 8 inch howitzers in the batteries in the CIDG camps has been about 40 rounds per tube per day, while the rate for the 8 inch battery on the coast has been about 24 rounds per tube per day. However, when this 8 inch battery is moved further west to support ARVN and US operations, its rate can be expected to rise to about 40 rounds per tube per day. The 175mm guns in the Americal have been averaging about 30 rounds per tube per day.

(Central I Corps)

In Central I Corps the Marine battery fire capabilities look like this.

(Northern I Corps)

In Northern I Corps each battalion has both 8 inch howitzers and 175mm guns; A total of 12 weapons in each battalion. The individual batteries are tailored to best accomplish the artillery support required from each position. Presently, there are 28 eight inch howitzers and 20 175mm guns in the 108th Group. The average rate of fire during June has been 53 8" rounds per tube per day and 39 175mm rounds per tube per day due to the high level of enemy activity in these two northern provinces. The Heavy artillery with XXIV Corps is organized for combat as shown (Organization for combat chart) on this chart. Two of the battalions of the 108th Artillery Group have missions of general support, reinforcing the 1st (ARVN) Infantry Division Artillery. One battalion is in general support, reinforcing the 101st Airborne Division Artillery.

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lery; and one battalion is in general support, reinforcing the fires of artillery with the 1st Bde, 5th Infantry Division. The Marine and Americal heavy artillery are in general support reinforcing their own US units only. As you can see by the assigned missions and fire capabilities, in Northern I Corps we have stressed support to ARVN forces and we have positioned our heavy artillery as far to the west as possible.

A word here about the ARVN Artillery. The ARVN Artillery units are good. Their batteries provide excellent close support for ARVN operations. And, their artillery is expanding. Within the last year three new battalions have been activated and deployed in I Corps Tactical Zone. But, they do not now have a heavy artillery capability and will not have until next year when two heavy battalions are scheduled to be activated. As the ARVN in Northern I Corps Tactical Zone have increasingly turned over the mission of population security to territorial Forces and moved to the west their capacity to use, and their need for, heavy artillery support has become much greater. In the mountainous areas west of the coastal plain, heavy artillery, with its increased range and destructiveness, can be used with maximum effectiveness. Eight inch howitzers are required to reduce the extensive bunker complexes found in the enemy base areas, and the 175mm guns, positioned west of the coastal plain, are the only artillery weapons which can be used to destroy targets along the enemy lines of communications extending west to the Laotian border.

Of course, these capabilities are used not only in support of specific combined operations, but are also invaluable during periods when allied mobility is severely restricted by weather. Last winter, during the northeast Monsoon season, when major Allied operations were largely restricted to the coastal plain, and air operations were often limited to low level visual reconnaissance, we employed heavy artillery to destroy targets in the enemy's line of communications in the western area of operations (AO) that otherwise would have been immune from attack for extended periods of time. In order to accomplish this we not only utilized the batteries on the westernmost fire support bases, but also often moved batteries to temporary locations beyond the line of permanent bases. We staged several of these "Artillery Raids" out of places such as Ca Lu (Point), FSB Anne (Point), and FSB Veghel (Point). This was before we occupied Veghel and Barbara on a full time basis. ARVN Infantry and Artillery participated in these raids. Although the restrictions on aerial surveillance, caused by weather, hampered our attempts to gather battle damage assessment, evidence, such as the enemy's inability to mount his planned TET Offensive in Northern I Corps, indicates our efforts were quite effective.

During this period when we were actually waging an artillery offensive designed to hamper an enemy build-up in the western AO, as well as fulfilling our traditional mission of providing support to the ground gaining arms, our ammunition expenditures steadily increased. This is reflected in this chart (Chart of Ammunition Expended to Date) which shows that during the first months of this year we were firing at approximately the same rate that we had fired the year before, although fewer tubes

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were available. This accelerated rate continued for a period after the end of the monsoon season as we increased our support of maneuver unit operations as well as continuing the program to disrupt enemy resupply operations in the western AO.

Although it may initially seem paradoxical, I believe that this summer, as maneuver units, accompanied by their light and medium artillery, move further west, we will see a reduction in ammunition expenditures by heavy artillery units. We have been using artillery to control by fire those areas which we were unable to control by maneuver forces, both as a result of limited mobility and reduction in forces. Now, as the maneuver units again occupy the ground, there should be a noticeable reduction in the heavy artillery fires employed in the western AO. However, there will be a continuation of the relatively high rate of expenditures (Chart) in light and medium artillery fires. As maneuver forces engage in offensive operations over areas formerly assigned to much larger forces, they will be forced to compensate for their reduced manpower by increased amounts of close support firepower.

When the Northeast Monsoon returns to this area in late September and October, we will again be faced with the necessity of covering large areas of the western AO by fire. However, this year the situation will be even more demanding of artillery, as there are progressively fewer troops and decreasing air assets. It will be necessary to carefully balance the operational necessity of engaging the many vital targets in the area against the reduced ammunition availability. Further, in Northern I Corps there will also be a reduction in the number of heavy artillery tubes available because of the requirement to replace marine heavy artillery support in Quang Nam Province. This may well result in higher rounds per tube expenditures in Northern I Corps than we are presently experiencing.

As a partial solution to the problem, XXIV Corps Artillery has taken several steps to increase the quality of fire support provided to GVN Forces by their organic light and medium artillery both now and in the future. The Corps Artillery Firing Battery Inspection Team, has changed its emphasis from the inspection of US batteries to ARVN artillery units. In conjunction with (ARVN) I Corps Artillery, we have initiated a program to train Regional Force Officers and Popular Force Leaders in artillery adjustment procedures. Another project nearing completion is the adoption of an Improved Fire Support Coordination and Liaison System, based on a joint study by XXIV Corps Artillery and I Corps Artillery and which will be implemented by parallel US and ARVN Regulations. Our accent is on support of GVN Forces, while continuing to provide responsive fires for US Forces. We have organized and positioned batteries of Corps Artillery to train the ARVN in the employment of heavy artillery while supporting their operations. We have collocated with ARVN units whenever possible. And, we have provided advice and assistance, and initiated programs designed to increase the proficiency of GVN Forces in technical fire control procedures, and techniques of fire support coordination.

In central and southern I Corps the progress in developing heavy artillery support for the ARVN units is not nearly so far along. Teaching them how and when to use heavy artillery and giving them confidence in employing it will only occur as American Advisors and US Commanders push it with the ARVN Commanders. Our experience up north proves the truth of this statement. There the ARVN make full use of our fire support and request heavy artillery support to include danger close missions with

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8 inch artillery. Where the NVA are in bunkers this has decided the issue in favor of the ARVN on numerous occasions.

Some of the positive steps recently taken to conserve heavy artillery ammunition and to better manage these critical assets are:

1. We have emphasized that only valid targets are to be engaged. They must be engaged with a sufficient amount of the proper type of fire to insure destruction or neutralization, but with intelligent restraint in the interest of resource management.
2. The use of heavy artillery to attack counterfire targets is being limited to known locations. In this environment, light or medium artillery is more appropriate than heavy artillery for engaging most of these targets. Further, the amount of fire placed upon a counterfire target must reflect the validity of the target; that is, suspect or confirmed, and the timeliness of response.
3. Heavy artillery is to be used against fleeting targets and targets of opportunity such as sensor detected targets only when the use of light and medium weapons is not feasible and there is reasonable assurance the fire can be delivered while the target is still there. Also, the amount of ammunition expended on a target must consider the fact that the maximum killing effect is obtained with the first volley, while the effects of subsequent volleys rapidly diminish.
4. Guidance on the positioning of artillery has been given, requiring subordinate commanders to take into account the probable targets to be engaged and the expected location of those targets. Light and medium artillery should be employed in support of those maneuver forces which are positioned to counter the primary enemy threat. The positioning must recognize the increasing role of territorial force artillery for population security and the maneuverability of light and medium artillery, both ARVN and US, which allows rapid response to contingency situations. Emphasis is being placed on positioning and employing heavy artillery in its traditional reinforcing role, to attack long range targets beyond the range capability of the light and medium artillery, and hard targets requiring the greater accuracy or destructive power peculiar to the larger caliber.

When fires are unobserved, units are to engage only those targets supported by valid, timely intelligence. Indiscriminate firing designed merely to harass the enemy is not condoned.

Centralized control of all fire support means within the scope of each level of command is the most efficient way to manage the application of firepower. Therefore, the attention of subordinate commanders has been directed to those specific responsibilities of fire support coordinators which call for:

1. Recommending the amount and type of firepower employed on each surface target to insure maximum results are achieved from minimum expenditure of resources, and recommending artillery positions to optimize the fire support available.

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To summarize we can quickly review the recent past and look to the immediate future. We have increased our use of artillery in order to engage the many vital targets which have resulted from increased enemy activity at a time when maneuver forces were being reduced. This is a trend which should logically continue as troop withdrawals progress; but with the lesser amounts of ammunition available we will be forced to husband our resources and closely scrutinize each target to insure that only the most lucrative are engaged.

To somewhat compensate for the reduction in heavy artillery ammunition we have already started emphasizing the use of light and medium artillery on all feasible targets, and have curtailed the number of heavy artillery rounds fired on each target. However, with this reduction in heavy artillery support, we must continue to search for other substitutes to insure that GVN forces are not penalized by a reduction in available fire support at the same time they are expected to increase their share of maneuver operations.

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ADMINISTRATION

1. (U) AWARDS PROGRAM.

a. During the period 17 Nov 69 to 1 Sep 70, the awards program has been substantially expanded and improved. The objective of the awards program is to recognize the contributions and achievements of the personnel in the XXIV Corps Artillery regardless of rank. The command policy has been to present the awards personally to all headquarters personnel, and to attend as many award ceremonies at the field units as practical, to include all awards for valor.

b. In addition, the XXIV Corps Artillery has expanded its Vietnamese awards program. Liaison was established with the appropriate ARVN officials to ensure the recognition of outstanding personnel who made significant contributions to the Vietnamese armed forces. Within the system are provisions for translating the decrees and requesting authority from CG, USARV for wearing the awards by the recipients.

2. (C) PERSONNEL STATUS.

a. The XXIV Corps Artillery personnel status remained at a fairly constant level except during the summer months of 1970. The summer cycle of officer rotations brought about a shortage of officers, particularly in the field grade positions. During the months of May, June, and July, the shortage of field grade officers in the rank of Lieutenant Colonel resulted in three battalions being commanded by Majors. In some instances, lieutenants and captains served in major's positions. However, the shortage was USARV wide and not a problem limited to Corps Artillery.

b. To reduce the effects of the high number of officer rotations in May through August, XXIV Corps Artillery made an effort to balance the number of personnel rotating within the individual units so that no one battalion lost a majority of officer personnel in a short time span. XXIV Corps Headquarters scheduled Corps Artillery's replacement of field grade officers at least two months in advance. The problem lay not so much in scheduling the timely arrival of incoming personnel, but rather in the availability of personnel on orders to RVN. The problem is caused to some extent by the Vietnamization of the war. It is apparent that fewer officers are slated for Vietnam, and until the projected troop strength in Vietnam becomes more definite, the officer shortage will continue. On the other hand, it is possible that the projected redeployment of US units may swell our officer ranks later in the year. Whether the influx of officers from other units will be sufficient is a matter of conjecture. Due to the rapidly changing situation in the military and political atmosphere in South Vietnam, a ready solution to the personnel shortage problem cannot be advanced. Of primary importance, however, is the fact that the artillery units must be assured of an adequate supply of experienced officer personnel to accomplish the assigned mission. As the overall US involvement in the war diminishes, the remaining units will be in an increasingly important position, particularly those US artillery units positioned in isolated firebases in forward areas.

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Each unit will be required to stretch its resources, both material and personnel, to take on an increasing burden of the workload to ensure continuing fire support to Allied forces. To accomplish this, sound leadership will be required on the part of those officers remaining. Enlisted personnel status was stable throughout the period. Replacements were adequate for all units and strengths were maintained at a satisfactory level.

3. (U) **MORALE.** XXIV Corps Artillery units are visited on a continuing basis to ensure that personnel have as many activities and facilities as the tactical situation permits. Every battalion has movie projectors and sound equipment for the regular showing of current movies. The various units operate both officer and enlisted clubs. Traveling entertainment groups visit the field and contribute greatly to the morale of the men. Of significant value to the soldier in the field is the sports equipment available to him through his unit supply room. The headquarters area of the 108th Artillery Group has constructed a swimming pool for its artillery-men.

4. (U) **RACE RELATIONS.**

a. The XXIV Corps Artillery has been fortunate in that it has not had a major racial incident. Every effort is being made to insure that each commander, down to and including section leaders, treats the personnel in his unit on a fair and equal basis.

b. As part of the effort to maintain racial harmony, the Deputy Commanding Officer of XXIV Corps Artillery actively participates in meetings of the XXIV Corps Senior Leadership Council, a panel established to prevent racial discord within the command. At battalion level is the Unit Action Committee, a council of officers and NCOs who work with racial problems at the small unit level. The Unit Action Committee Report is submitted monthly in accordance with XXIV Corps Regulation 600-3 by each battalion. The report notes any actions taken which resulted from or contributed to racial disharmony. The report serves as a guide to commanders in planning personnel actions and policies.

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LOGISTICS

1. (U) **General.** Maintenance, supply, and service support was provided by the US Army Support Command, Da Nang. The Support Command controlled the 26th General Support Group in Phu Bai, which provided support for all Corps Artillery units north of the Hai Van Pass, and the 80th General Support Group in Da Nang which furnished support for all units from the Hai Van south to the MR 2 Boundary. The Support Command is a professional and responsive group that has met the many and varied needs of the Corps Artillery units.

2. (C) **Maintenance.** Common maintenance problems experienced throughout the period were concerned mainly with heavy artillery weapons, tracked cargo carriers, recovery equipment, radar sets, generators and refrigeration equipment.

a. Heavy artillery weapons, M107/110, required the major portion of the maintenance effort, as could be expected. Because the units leave their fire support bases infrequently, the other equipment is not taxed to the same degree as are the pieces. The major components replaced were tubes, cannon assemblies and mounts, with a tube replacement factor of one per-month-per-gun during intensive firing periods. The average rounds per tube per day fired often exceeded 50, with the majority being fired at maximum zone or charge. Increased ammunition expenditure rates resulted in numerous problems with the M107/110 carriages, including failure of the M158 gun mounts, spade cylinders, lockout cylinders, hydraulic elevating mechanisms, and loader-rammer equipment. Many weapons were hand loaded and rammed during the period. Although the major problems centered around the gun and mount, fuel cells and cracked hulls presented an increasing problem as equipment became older. The components mentioned above accounted for approximately 70 per cent of the weapon non-firing time. The balance was caused by engine and electrical system failures and scheduled maintenance. To overcome these problems, the artillery battalions, in conjunction with direct support maintenance, initiated a quarterly maintenance program in which each weapon was serviced by support maintenance each quarter. An inspection was performed by technically qualified personnel in the direct support units, and necessary replacement parts were ordered. When the parts were received, the weapons, as well as their crews, were sent to the support unit for a 7 to 10 day period of maintenance and on-the-job instruction. Because in many instances this was their first formal training in maintenance on their weapon, gun crews benefited considerably from the experience. However, a program of repair and replacement can be no better than the supply system that supports it, and the direct support unit frequently was unable to obtain all the required parts. Despite this fact, advantages of the program include the experience gained by the crews and maintenance manhours made available to the artillery commander. In an endeavor to meet the rigorous demands of

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maintenance, continuous use was made of armament and automotive technicians from several commodity commands assigned to the Support Command in Da Nang, and following each session of concentrated effort in a given area, the units enjoyed a relatively trouble-free period. Overall, the maintenance of artillery weapons, by both organizations and DS Maintenance personnel has been commendable. XXIV Corps Artillery units have fired greater amounts of ammunition than has that of any of the other Corps, and has consistently met the US Army Vietnam standards for heavy artillery equipment maintenance.

b. Vital pieces of equipment in the artillery organization are tracked cargo carriers and recovery equipment. The M548 Cargo Carrier used in Vietnam is a necessity during the monsoon season and on artillery raids. The vehicle is nearing its phase-out period and is increasingly difficult to maintain from the repair-parts standpoint. The value of resupply by tracked vehicle has been proven beyond question where artillery is utilized in isolated locations, and every effort should be made to continue to provide this capability for resupply. To insure a tracked vehicle resupply capability during the monsoons and during artillery raids, in the XXIV Corps the M548 was administratively deadlines for all other missions. This frequently placed an increased burden on other resources. However, because of reduced supply lines, distances, and the relatively compact area of operations, this was not beyond reason and it assured resupply when and where it was required. Replacement M548 vehicles are due in-country in September 1970 and should be available to meet the demands imposed by Northeast monsoons that will shortly follow.

c. Equipment decidedly more vital to heavy artillery than the tracked cargo vehicles is the M543 or M62 wrecker and the M578 light recovery vehicle. These pieces of equipment are frequently the deciding factor in equipment down time. Operations on the isolated fire bases in Vietnam make it imperative that maximum maintenance by unit and support personnel be performed in the forward area. The lift capacity of the wrecker and the recovery vehicle all too often dictate the rapidity of maintenance response. Very little major maintenance can be performed on heavy artillery weapons without removing the cannon assembly and/or the main engine. In the case of the cannon assembly this requires two lifting vehicles. In the event a battalion has a simultaneous requirement for two tube changes in widely separated fire bases, many hours and sometimes days of non-firing time resulted. Recovery equipment used under such circumstances quickly wore out and required extensive time to replace. In one instance, a battalion was without the M543 for five months. Although a solution to the maintenance and equipment availability problem was not found, future authorizations for heavy artillery batteries should include an M543.

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wrecker and operator. The M578 has an adequate capability and presented no unusual maintenance problem, although a heavier recovery vehicle, the M88, was borrowed from neighboring tank battalions for recovery in the mountainous areas near some of the fire bases.

d. An additional item of equipment found necessary in the fire base operation for handling of paletized ammunition was the 6,000 pound forklift. These were secured from US Army Vietnam on a loan basis and will be included in the next MTOE update. The forklifts were integrated into the service batteries without additional personnel for operation or maintenance. Special tools were not available. Maintenance problems have not been experienced to date on this equipment, although constant use will probably result in increased down time. Operators and maintenance personnel were trained through coordination with the Support Command in Da Nang and the local terminal service units in the Tan My Port. A prescribed load list for repair parts is being established based on local direct support figures and user experience factors. The pitfall of inexperienced operator and maintenance personnel and lack of repair parts and special tools is frequently overlooked until major problems have developed.

e. Radar equipment, and generators for both radars and FADAC presented complex problems. Organizational equipment and personnel are not capable of maintaining this equipment, because of its complexity to the degree the other equipment is maintained, and Artillery organizations are heavily dependent upon supporting maintenance technicians. Through maximum use of support maintenance technicians, generators and radars were kept in a operable condition. The Support Command in Da Nang made the services of these personnel available on a continuous basis. Back-up generator equipment has been provided the FADAC. A similar system was established for radars in the early part of 1970, but because of limited assets the second generator for the AN/MPQ4 radars has not been received. There has been a continuing inquiry through logistical and command channels on this subject. Although radar equipment has been upgraded during the period with all AN/MPQ 10's being replaced by AN/MPQ 4's, radar down time has been in excess of acceptable standards.

3. (C) Supply. The supply structure in MR1 follows generally that outlined for maintenance.

a. The supply system was very responsive to the needs of the combat elements and shortages which developed were country-wide shortages and not exclusive to MR1. This is exceptional in the fact that the MR1 has the longest resupply lines, and stock management responsibility is located in the Inventory Control Center in Long Binh. The geographical disadvantage was overcome in most critical areas

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by continuous liaison between the artillery units and the Support Command staff. This was a cooperative effort in which the tactical requirements of Corps Artillery were made known to the support elements soon enough for them to react. Although their stockage was based primarily on usage factors, profitable use was made of forecasts for heavy artillery tubes, cannon assemblies M107/110 carriages and ammunition. During the period January to July 1970, XXIV Corps Artillery, because of high expenditure rates, used the bulk of heavy artillery ammunition, gun tubes, cannon assemblies and carriages available in South Vietnam. The anticipated usage factors supplied to the Inventory Control Center by XXIV Corps Artillery were reasonably accurate and succeeded in maintaining the artillery in a state of combat readiness during the heaviest ammunition expenditure period. The support provided during this intense expenditure period was generally outstanding. One critical area which has not been resolved, however, is the supply of commercial gasses, primarily helium and nitrogen. This is now being forecast by the corps and division artillery units for the Inventory Control Center, and adjustments to stockage objectives will partially resolve the problems. Self Service Supply Centers are operated in the DaNang and Phu Bai areas. This system is satisfactory and meets the needs of the command.

4. (U) Services. Transportation and engineer support provided Corps Artillery was excellent. Transportation was provided through the Support Command structure and engineer support by the 45th Engineer Group located in the Phu Bai area. Combat engineer support was requested primarily for road construction and fire base clearance and construction. During the spring of 1970 small unit engineer detachments were phased out and the normal base camp support maintenance was assumed by the Pacific Architect and Engineer Corporation, Vietnam (PA&E). The level of support has not materially changed for base camps; however, a restriction in the PA&E contract limits support to US fire bases. In instances where camp ownership has been transferred to the Vietnamese Army control, US units remaining on the base must be self supporting. This is an unresolved problem that was presented to CG, US Army Vietnam for resolution in May 1970, and is an area of great importance. for future troop reductions will find this situation repeated many times. A possible solution is to charge PA&E with support for that portion of the base occupied by US units.

5. (U) Refrigeration, ice making and air conditioning equipment is a very critical commodity in Vietnam from the standpoint of health, welfare and operations. An unusual mixture of air conditioner and refrigeration units have been provided for use in base camps and fire bases. Although there is a standard gasoline powered refrigeration unit authorized for issue to company size units in Vietnam, the total requirement was not met. To overcome this shortage, commercial household units have been issued. This has resulted in maintenance and repair problems far beyond the capability of support elements.

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6. (U) Command Maintenance Management Inspections. Corps Artillery formed a command maintenance management inspection team in July 1968. The team initially inspected artillery units and later in 1969 expanded to include separate units attached to XXIV Corps Headquarters. Corps Artillery retained responsibility through the January - April 1970 inspections, which marked the completion of four inspection cycles. On 1 July 1970 the assistant Chief of Staff G4, XXIV Corps assumed the responsibility for the team. The inspections conducted proved beneficial to artillery units. To complement them each commander has, on a limited scale, established an organic inspection team which encompasses the areas covered by the Annual General Inspection and the Command Maintenance Management Inspections.

7. (C) Construction of fire support bases and lines of communications. A standard type firing position has been developed, to include powder and projectile bunkers. Personnel bunkers, mess facilities and other support facilities are developed as terrain and resources permit, and are limited only by individual initiative and engineer and material support. Fire bases should be built on relatively high ground in relation to surrounding terrain to facilitate drainage as well as security. The drainage consideration is a must in gun positions and ammunition storage areas. The use of concrete footings beneath the wooden beams used as a firing platform has in several instances, appeared to create a undue stress on gun carriages. (A number of fuel cell leaks and faulty spade cylinders and lockout cylinders have developed where these type firing positions were used). Protective metal layers should be built into all bunkers. This is required to prevent mortars and rockets from penetrating the sand bags prior to detonation. The fragmentation effect of the protective metal can be avoided by placing the metal between layers of sand bags. Additionally, a thin casing of concrete should be plastered over all sand bag revetments. This will provide a water-proofing measure and slow the extremely rapid deterioration of sand bags. Stand-off chain link fencing for protection from rocket propelled grenades should be placed around firing positions and ammunition storage areas. A prestock package for fire bases could be developed. This should include plans and material and be stocked for permanent and temporary bases. However, these become very difficult to maintain during rainy weather. This is a prime reason for conserving vehicles with the greater mobility and using only wheeled vehicles during the dry season. The selection of fire base locations should consider the availability of usable and maintainable lines of communication.

8. (C) Reconstruction of a medium artillery battalion to a heavy artillery battalion. The 1st Battalion, 39th Artillery was converted from a 155 mm SP Battalion to a 175mm/8inch Battalion in March and April 1970. A major problem was retaining a stable supply and maintenance posture with mixed equipment. Personnel were not familiar with heavy artillery and lacked the material resources to keep the unit on a par with other heavy battalions. Although the unit was soon equipped with 12 heavy artillery weapons, it has not yet received all of the remainder of its equipment. The changeover was accomplished during a period of MTOE moratorium and action was taken to secure the balance of equipment on temporary loan from USARV assets. This is not satisfactory

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and a system of special processing should be established to allow such conversion in a limited time. The required MTOE actions resulted in a long, tedious and confusing period for the battalion. This, coupled with rotation problems, has broken the logistics continuity chain so frequently that the battalion has been forced to reinitiate special loans for MTOE equipment shortages. Expeditious action to approve reconstitution and redesignation of units would enable the command to realign the personnel and logistics assets much more rapidly.

9. (C) Unit redeployment success is dependent on timely and accurate receipt of instructions and assistance from support elements and higher headquarters. Turn-in of equipment that was evacuated for repair is laterally transferred to remaining units, and when released became excess to the receiving unit. This should not happen. Equipment of this type should be turned in to support units, and work requests submitted with the turn-in. A very strict control must be exercised over lateral transfers to avoid build-up of excesses and loss of critical items to the supply system. When possible, a staging area adjacent to the support elements should be made available to the deploying unit along with transportation support. A temporary staging unit made up of elements from like organizations in the area will relieve the deploying unit of equipment requirements and facilitate rapid redeployment.

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COMMUNICATIONS EXIT BRIEFING

1. (C) Use of Secure Voice Communications by Artillery Units in XXIV Corps.

a. Initiation of the NESTOR program provided for tactical secure voice (FM) communications to XXIV Corps Artillery units. The largest single obstacle to implementation of this program has been the non-availability of security equipment. A priority system was established for securing FM nets in Corps Artillery. First emphasis has been upon securing of Corps Artillery Command Fire, Group Command, and Battalion Command Nets. The shortage of security equipment and hardware components has resulted in many of the nets having to operate as a mixture of secure-capable stations and non-secure stations with the key stations given first capability to transfer to the secure mode of operations. Although approximately 28 pieces per battalion of Nestor equipment are required to provide adequate security of Artillery Battalion Command and Fire Nets, each battalion averages approximately 17 pieces of equipment, with an average of three of these pieces still not operational due to non-availability of components.

b. Relocation of XXIV Corps Artillery to Da Nang created distances from Artillery with the Corps units which exceeded FM secure capability because of intervening terrain obstacles. The effectiveness of net coverage was severely limited until secure voice regenerative retransmission equipment became available on approximately 1 June 1970. On 8 June 1970 the Corps Artillery secure voice Command Fire Net (FM) was established and provides for transmission of classified voice communications to all major artillery units with the Corps throughout MR1. This system has given good performance in operations to stations from the DMZ and also to those stations located as far away as the southern boundary of the MR1.

2. (C) Communications Contingency Planning.

a. Contingency planning has made maximum use of existing communications systems and facilities, with efforts made to utilize common user communications where possible. The use of alternately designated command posts has made possible implementation of contingency operations with minimum augmentation and expansion of existing facilities and systems. Where expansion of circuitry has been necessary, pre-designated circuits have been engineered and tested for contingency call up.

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b. Planning for artillery operations has employed the technique of pre-designating frequencies, which in some cases involves plans for pre-emption from lower priority use, and call words in a task force SOI. Plans have provided that units with Nestor equipment utilize this to the fullest extent possible, to include use during road movements for convoy control. In many cases pre-scheduling of Artillery fires by blocks and numbers has served to simplify communications and reduce radio transmissions. FM radio has been the principal means of communications employed for artillery operations.

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